Hypertension Management: Improving Medication Adherence Through the Use of Daily Text Messages

Gaelle M. Bulabula, MSN, RN, DNP Student

Significance of the Problem

- More than 7.5 million deaths each year are attributable to uncontrolled hypertension (WHO, 2019).
- Hypertension is responsible for approximately 50% of all cardiovascular and cerebrovascular events (Al-Noumani et al., 2018).
- Only 40-74% patients who are treated for hypertension in the United States take their medications as prescribed (CDC, 2019).
- 34–78% of patients prescribed antihypertensive medication cease taking it within a year (Varleta et al., 2017; WHO, 2019).
- Non-compliance with prescribed hypertension treatment is associated with 50% of treatment failures (Kim et al., 2018).
- Non-adherence with prescribed hypertension treatment leads to approximately 125,000 deaths, each year (Kim et al., 2018).

PICOT

- In primary care setting, in adults, male or female, 18 years and older with a diagnosis of hypertension and who are taking antihypertensive medications (P), does receipt of daily text messages (I) compared to education provided during each office visit (C) influence medication adherence (O) over a six-week time period (T)?

Review of Literature

Evidence	Database	LOE/Quality
Wald et al. (2015)	COCHRANE	I/ Good
Khonsari et al. (2015)	PUBMED	II / Good
Bobrow et al. (2016)	PUBMED	II / Good
Park et al. (2014)	COCHRANE	II / Very good
Kassavou et al. (2020)	PUBMED	II / Good
Andre et al. (2019)	CINAHL	I / Very good
Thakkar et al. (2016)	Hand Search	I / very good
Varleta et al. (2017)	Hand Search	II / Good
Buis et al. (2017)	Hand search	II / Good
Leon et al. (2015)	CINAHL	V / Good

Best Practice

- The use of daily text messages as reminders near each medication dosing time
- The use of text reminders with patient education on hypertension

Implementation

Setting: Primary care clinic in Indianapolis

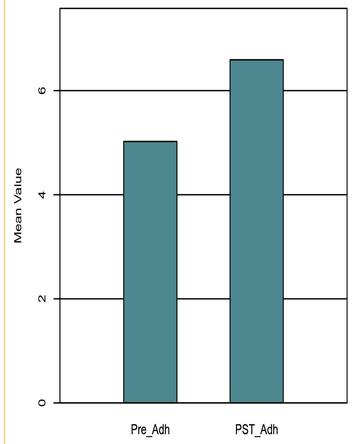
Participants: 17 adults diagnosed with hypertension managed with medication(s)

Intervention:

- Daily text messages sent at every medication dosing time
- Educational messages sent 3 times per week
- MMAS-8 scale use to measure medication adherence at baseline and following intervention

Time frame: 6 weeks

Evaluation



Outcome:
Medication adherence, prior to and following the intervention, was evaluated using the MMAS-8 scale

Following the intervention, there was a statistically significant improvement in medication adherence ($t(10) = -3.08$, $p < .05$)

Conclusion & Recommendations

- Improved medication adherence with the use of text reminders
- The EBP project increases participants' knowledge of hypertension
- Advance practice registered nurses (APRNs) are effective agents for this type of intervention
- The Iowa Revised Model was useful to promote practice change
- Future research should focus on correlation between anti-hypertensive medication adherence and blood pressure
- Future EBP projects should include follow-up to ensure the delivery of text messages

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